



Environmental Analysis Program

Pomona College
Biogeochemistry Laboratory

SOP-F002

Field Equipment Checklist

Standard Operating Procedure

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1. Purpose

This SOP provides standardized checklists for packing, verifying, and returning field equipment. Using a checklist before every field outing prevents forgotten items, reduces time lost in the field, and ensures that equipment is returned clean, functional, and ready for the next user. This SOP complements the safety and planning procedures in [SOP-F001 Field Safety](#) and the equipment inventory in [SOP-L007 Equipment Inventory](#).

2. Scope

- **Applies to:** All EA Program field outings, including research sampling events, class field trips, and equipment loans

- **Does not apply to:** Laboratory-only procedures; drone operations (see dedicated SOP when available)
- **Location:** Equipment stored in SGM 131, 132, 133, and 134; deployed to all EA field sites

3. Responsibilities

Role	Responsibility
Field Lead	Verify checklist completion before departure; confirm equipment return
Trained Personnel	Pack and check equipment; clean and return after use
New Students	Assist with packing under supervision; learn storage locations

4. Definitions

Not applicable. This SOP covers logistical checklists using standard English equipment names that require no technical definition. For definitions of field measurement terms, consult the method-specific SOPs listed in Section 5 (Equipment Modules).

5. References

6. Procedure

6.1. Before Departure

1. Identify which **activity modules** (Section 5) apply to the planned field work. Most outings require the Core Module plus one or more activity-specific modules.
2. Print or copy the relevant checklists. Check off each item as it is packed.
3. For instruments requiring calibration (Eureka Manta2, pH meter), calibrate in the lab before packing. Record calibration results in the field notebook.
4. Verify that all batteries are charged (Crime-Lite, GPS, walkie-talkies) and that backup batteries are included.
5. Confirm cooler ice or ice packs are frozen and ready.
6. Complete the Field Work Planning Form in [SOP-F001](#), Section 13.
7. The field lead initials the checklist and confirms vehicle reservation per [SOP-F100](#) if applicable.

6.2. On Site

1. Unpack systematically; keep items organized to avoid loss.
2. At the end of the sampling event, re-check the checklist to confirm all items are accounted for before leaving the site.
3. Note any damaged or malfunctioning equipment on the checklist.

6.3. After Return

1. Clean all equipment per the relevant method SOP (rinse sampling equipment with DI water, wipe down instruments, dry sieves).
2. Return every item to its designated storage location (see room assignments below and [SOP-L007](#)).
3. Recharge batteries and replace consumables (sample bottles, filters, preservatives) for the next user.
4. Report any damaged, lost, or malfunctioning items to the field lead or lab manager immediately.
5. File the completed checklist with the field data sheets.

6.4. Storage Locations

Storage Room	Equipment Category
SGM 131	Tapes, sieves, survey scopes, infiltrometers, walkie-talkies
SGM 132	Vehicles, coolers, generators
SGM 133	Sampling bottles, sondes, VanDorn bottles, LiCor sensor, microscope, analytical instruments
SGM 134	DI water system, glassware, vacuum filtration supplies

7. Equipment Modules

7.1. Core Module (Every Field Outing)

This checklist applies to every field trip regardless of activity type.

Item	Storage	Check
Completed Field Work Planning Form (SOP-F001)	–	☐
Field notebook (Rite in the Rain) and pens	SGM 133	☐
Cell phone, charged, with emergency contacts	Personal	☐
First aid kit	In vehicle	☐
Sunscreen and sun hat	Personal	☐
Full water bottles (one per person)	Personal	☐
Nitrile gloves (box)	SGM 133	☐
GPS unit or smartphone with GPS app	SGM 133	☐
Camera (or phone camera)	Personal	☐
Vehicle keys and fuel card	In vehicle	☐
Walkie-talkies (if splitting into groups)	SGM 131	☐
Trash bag (leave no trace)	–	☐
Clipboard	SGM 133	☐

7.2. Water Sampling Module

Use for surface water grab sampling, stormwater sampling, and bacteria sampling. See [SOP-F300](#) and [SOP-F302](#).

Item	Storage	Check
Pre-labeled sample bottles (poly and/or glass, with preservatives)	SGM 133	[]
Cooler with ice packs or ice	SGM 132	[]
Chain of custody (COC) forms	SGM 133	[]
Sample tags	SGM 133	[]
Extension pole with bottle attachment	SGM 133	[]
Sterile 100 mL Colilert bottles	SGM 133	[]
0.45 µm syringe filters and syringes	SGM 134	[]
Deionized water (squeeze bottle)	SGM 134	[]
Paper towels	SGM 134	[]
Field data sheets (water sampling)	SGM 133	[]
VanDorn bottle (if needed)	SGM 133	[]
Wading boots (if entering water)	Personal	[]

7.3. Soil Sampling Module

Use for soil profile description, bulk density, and grab samples. See [SOP-F400](#) and [SOP-F407](#).

Item	Storage	Check
Soil auger or hand trowel	SGM 131	[]
Pre-labeled Ziploc bags or Whirl-Pak bags	SGM 133	[]
Munsell color chart	SGM 131	[]
Soil core rings (bulk density)	SGM 131	[]
Rubber mallet	SGM 131	[]
Field data sheets (soil)	SGM 133	[]
Cooler with ice (perishable samples)	SGM 132	[]

8. Related SOPs

SOP	Title	Relationship
F001	Field Safety	Required prerequisite
F003	Field Notebook Protocols	Notebook is on checklist
L007	Equipment Inventory	Storage locations
F100	EA Program Vehicle Use	Vehicle reservation

9. Training Record

Before leading a field outing independently, personnel must:

1. Read this SOP in full
2. Identify the correct storage room for each major equipment category
3. Complete a supervised pre-departure checklist for one field outing
4. Be signed off by the field lead or PI